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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/374,460	08/13/1999	HAMAYUN MUJEEB	10360/031001	3785

26161 7590 05/06/2003

FISH & RICHARDSON PC
225 FRANKLIN ST
BOSTON, MA 02110

EXAMINER

DO, NHAT Q

ART UNIT	PAPER NUMBER
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2663

DATE MAILED: 05/06/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/374,460	MUJEEB ET AL.	
	Examiner	Art Unit	
	Nhat Do	2663	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 January 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 16-19, 23-44, 47-50, 54-76, 79-82 and 86-106 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 95, 96, 98, 99, 101 and 102 is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-13, 16-19, 23-26, 29-44, 47-50, 54-57, 60-76, 79-82, 86-89, 92-94, 97, 100, 103-106 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 27, 28, 36, 37, 58, 59, 68, 69, 90, and 91 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7, 8, 10-13, 16, 23-26, 29, 30, 32-35, 38, 39, 41-44, 47, 54-57, 60, 61, 64-67, 70, 71, 73-76, 79, 86-89, 92, 93, 97, 100, 103, and 104-106 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,075,767 to Sakamoto et al.

Regarding to claim 1, Sakamoto et al disclose a system that performs:

Switching from the line interface card 1-1 (first physical interface) to the line interface card 1-2 (second physical interface) (Col. 10, lines 24-29) based on the status value (information) in the selector control register 27 (interface redundancy group) (Col. 8, lines 11-15; lines 55-59).

The responsibility of the cards comprises routing function (Col. 9, lines 3-12). It is inherent that the card 1-2 assumes responsibility of the card 1-1 because the cards are identical (Fig. 1).

Sakamoto et al also disclose the card 1-1 is a working (primary) one and the card 1-2 is a protection (secondary) one (Col. 10, lines 24-29), which is set by the status value in the selector control register 27.

Regarding to claims 2, 24, 65, and 87, the status value (Col. 8, lines 11-15) is the claimed information.

Regarding to claims 3, 25, 66, and 88, Sakamoto et al disclose the procedure of switching when detecting a defect at the working card (Col. 2, lines 27-30; col. 7, line 62-col. 8, line 33).

Regarding to claims 4, 26, 67, and 89, Sakamoto et al disclose detecting the defect (failure) of the physical layer (physical interface) at the working card (Col. 2, lines 27-34; col. 7, lines 62-64).

Regarding to claims 7, 29, 67, 70, and 92, Sakamoto et al disclose the event comprises switchover (slot failure/reset) at the first physical interface (Col. 2, line 20)

Regarding to claims 8, 30, 71, and 93, Sakamoto et al disclose the procedure of switching when the second card in the passive mode is dormant (Col. 9, lines 29-col. 10, line 9).

Regarding to claims 10, 11, 73, and 74, Sakamoto et al disclose the cards support one or more network layer interfaces (Col. 7, lines 62-67).

Regarding to claims 12, 75, Sakamoto et al disclose the cards comprises ATM physical interface 20(Fig. 1; col. 1, lines 20-33).

Regarding to claims 13, and 76, Sakamoto et al disclose the cards are on a single network router 11 (Fig. 4).

Regarding to claims 16, 79, Sakamoto et al disclose the cards are identical (Fig. 1).

Regarding to claims 23, Sakamoto et al disclose to cards process ATM protocol data (Col. 7, lines 62-67; col. 9, lines 3-12). Sakamoto et al further disclose establishing ATM network layer interface that was established over the first ATM card prior to switching (Col. 9, line 28-col. 10, line 9).

Regarding to claims 64, and 86, Sakamoto et al disclose the switching operation is controlled by the control part 4 (processor) (Col. 8, lines 26-33).

Regarding to claims 104, and 106, since it is an ATM network, the transmission path (Fig. 1; col. 1, lines 20-33) is the claimed virtual circuit.

Regarding to claims 32-35, 38, 39, 41-44, 47, 54-57, 60-62, and 105, it is inherent that there is a computer program for instructing the steps of claims 1-4, 7, 8, 10-13, 16, 23-26, 29-31, and 105 respectively because the Sakamoto et al disclose the switching is controlled by firmware (Fig. 12).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 9, 31, 40, 62, 72, and 94 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al as applied to claims 1, 23 respectively above, and further in view of U.S. Patent No. 5,903,544 to Sakamoto et al.

Regarding to claims 9, 31, 72, and 94, Sakamoto et al fail to disclose in '767 the first and second cards communicate over the network at the same time. Sakamoto et al disclose in '544 a similar system wherein the first and the second cards communicate over the network at the same time (Col. 6, lines 50-60). It would have been obvious to a person having ordinary skill in the art by the time the invention was made to modify the system in '767 by making the first and second cards communicate over the network at the same time as in '544. A skilled artisan would have

Art Unit: 2663

been motivated to do so in order to avoid resource wasted as Sakamoto et al taught in '544 (Col. 2, lines 22-31).

Regarding to claims 40, and 62, Sakamoto et al fail to disclose a computer program for instructing the steps of claims 9, 31 respectively. However, it is well known in the art that a procedure can be implemented by using hardware, software, or firmware. Each way has its own trade-off characteristics. Using software gives more flexibility in modifying the system because what must be done is just rewriting the program. Therefore, it would have been obvious to a person having ordinary skill in the art by the time the invention was made to write a computer program for instructing the steps of claims 9, and 31. A skilled artisan would have been motivated to so in order to employ the flexibility in modifying the system.

5. Claims 17-19, 48-50, and 63 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakamoto et al as applied to claim 1 above, and further in view of U.S. Patent No. 6,208,616 to Mahalingam et al.

Sakamoto et al fail to disclose a third card as a backup card and switch to the third card when the first and the second ones fail. Mahalingam et al disclose a similar structure, wherein using a third card as a back up card and switch to the third card when the first and the second ones fail (Col. 6, lines 50). It would have been obvious to a person having ordinary skill in the art by the time the invention was made to further modify the system taught by Sakamoto et al by adding a third card as a backup card and switch to the third card when the first and the second ones fail. A skilled artisan would have been motivated to so in order increase the reliability of the system when the system functions in a severe environment and the chance of component failure is high.

Art Unit: 2663

Regarding to claims 48-50, and 63, Sakamoto et al and Mahalingam et al fail to disclose a computer program for instructing the steps of claims 17-19 respectively. However, it is well known in the art that a procedure can be implemented by using hardware, software, or firmware. Each way has its own trade-off characteristics. Using software gives more flexibility in modifying the system because what must be done is just rewriting the program. Therefore, it would have been obvious to a person having ordinary skill in the art by the time the invention was made to write a computer program for instructing the steps of claims 17-19. A skilled artisan would have been motivated to do so in order to employ the flexibility in modifying the system.

Allowable Subject Matter

6. Claims 5, 6, 27, 28, 36, 37, 58, 59, 68, 69, 90, and 91 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. Claims 95, 96, 98, 99, 101, 102 are allowed.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nhat Do whose telephone number is (703) 305-5743. The examiner can normally be reached on 8:30 AM - 5:30 PM Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703) 308-5340. The fax phone numbers for the

Art Unit: 2663

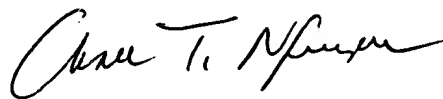
organization where this application or proceeding is assigned are 703-308-6743 for regular communications and 703-308-6743 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Nhat Do
Examiner
Art Unit 2663

ND

April 29, 2003



CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
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